



[12113/46002]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BOARD OF PATENT APPEALS AND INTERFERENCES

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In re Application of: : Examiner: Ishwarbhai B. Patel
Yuqun ZENG :
For: ESD SAFE WIRELESS TYPE OF :
COMPONENT :
Filed: February 28, 2002 :
Serial No.: 10/087,706 :
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3/7/06
Michael P. Paul

APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

S I R:

In the above-identified patent application ("the present application"), the Appellant mailed a Notice of Appeal on November 1, 2005 from the Final Office Action issued by the United States Patent and Trademark Office on June 1, 2005. This Notice of Appeal was received by the Patent Office on November 7, 2005.

In the Final Office Action, claims 1 to 4 and 6 to 14 were finally rejected. An Advisory Action was mailed on November 23, 2005.

In accordance with 37 C.F.R. § 47.37, this Appeal Brief is submitted in triplicate in support of the appeal of the final rejection of claims 1 to 4 and 6 to 14. For the reasons more fully set forth below, the final rejection of claims 1 to 4 and 6 to 14 should be reversed.

1. REAL PARTY IN INTEREST

The real party in interest in the present appeal is SAE Magnetics (H.K.) Ltd., SAE Tower, 38-42 Kwai Fung Crescent, Kwai Chung, N.T., Hong Kong Special Administrative Region, People's Republic of China. SAE Magnetics (H.K.) Ltd. is the assignee of the entire right, title, and interest in the above-identified application.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences "which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal."

3. STATUS OF CLAIMS

Claims 1, 4 and 6 to 8 stand finally rejected under 35 U.S.C. § 103(a) as being obvious over Japanese Patent Publication No. 02-17289 ("Kawakami") in view of U.S. Patent No. 5,436,803 ("Annis") and U.S. Patent No. 5,245,613 ("Takami").

Claims 2 and 3 stand finally rejected under 35 U.S.C. § 103(a) as being obvious over Kawakami in view of Annis and Takami, and further in view of U.S. Patent No. 5,350,228 ("Remington").

Claims 9 to 14 stand finally rejected under 35 U.S.C. § 103(a) as being obvious over Kawakami in view of Annis and Takami, and further in view of U.S. Patent No. 6,459,943 ("Dodsworth").

Appellant appeals from the final rejection of claims 1 to 4 and 6 to 14. A copy of the appealed claims is attached hereto in the Appendix.

4. STATUS OF AMENDMENTS

In response to the Final Office Action issued on June 1, 2005, an Amendment was filed on November 1, 2005. The Amendment did not include any amendments to the claims.

5. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 relates to an ESD electrostatic discharge device (ESD) safe wireless type of component.

Fig. 2 shows a cross section of an exemplary embodiment of the claimed subject matter. As shown in Fig. 2, the ESD safe wireless type of component comprises a base 1, an electrically conductive copper trace 2 provided on the base 1, an insulating layer 3 coated on the copper trace 2, and a dissipative coating layer 4 applied on the top of the

insulating layer 3. The dissipative coating layer 4 ranges in thickness from about 5 μm to about 100 μm , and is selected from a polymer material having a surface resistivity in the range of $10^6 - 10^{10} \Omega/(\text{unit square})$. During the manufacturing process, an appropriate mask is employed for coating of the dissipative material with a bonding pad area exposed just after the insulating layer is coated. See page 3, lines 1 to 15, of the Specification.

Fig. 3 is a top view of the ESD safe wireless type of component according to the present invention. As shown in Fig. 3, the dissipative layer is applied on the ESD safe wireless type of component and all connecting cables, with the bonding pad area left uncovered by the dissipative layer. See page 3, lines 16 to 18, of the Specification, and claim 5 as originally filed.

The dissipative coating layer of the ESD safe wireless type of component in accordance with the present invention is able to isolate the insulation material from direct tribo-charge against human handling or other materials during manufacturing processes of the ESD sensitive device. In particular, test results of EOS/ESD standard tribo-charges set up show that the ESD safe wireless type of component according to the present invention is capable of reducing static charge from 1000 V to below 10 V. See page 2, lines 11 to 14, and page 3, lines 21 to 23, of the Specification.

6. GROUND FOR REJECTION TO BE REVIEWED ON APPEAL

A. Whether claims 1, 4 and 6 to 8 are obvious over Kawakami in view of Annis and Takami.

B. Whether claims 2 and 3 are obvious over Kawakami in view of Annis and Takami, and further in view of Remington.

C. Whether claims 9 to 14 are obvious over over Kawakami in view of Annis and Takami, and further in view of Dodsworth.

7. ARGUMENTS

A. **Claims 1, 4 and 6 to 8 are not obvious over Kawakami in view of Annis and Takami.**

Claims 1, 4 and 6 to 8 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kawakami in view of Annis and Takami. It is respectfully submitted that none of

claims 1, 4 and 6 to 8 is obvious over Kawakami in view of the Annis and Takami, for at least the following reasons.

In order for a claim to be rejected for obviousness under 35 U.S.C. § 103(a), not only must the prior art teach or suggest each element of the claim, but the prior art must also suggest combining the elements in the manner contemplated by the claim. See *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 934 (Fed. Cir. 1990), cert. denied, 111 S. Ct. 296 (1990); *In re Bond*, 910 F.2d 831, 834 (Fed. Cir. 1990). The Examiner bears the initial burden of establishing a prima facie case of obviousness. M.P.E.P. §2142. To establish a prima facie case of obviousness, the Examiner must show, inter alia, that there is some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references and that, when so modified or combined, the prior art teaches or suggests all of the claim limitations. M.P.E.P. §2143. Appellant respectfully submits that these criteria for obviousness are not met here.

Claim 1 relates to an electrostatic discharge device (ESD) safe wireless type of component, which includes a base, an electrically conductive copper trace and an insulation layer, in which a dissipative coating layer is applied onto the top of the insulation layer and all connecting cables of ESD sensitive devices.

As admitted on page 4 of the Final Office Action, the primary Kawakami reference does not in any way disclose or suggest the features of claim 1 with respect to a dissipative coating layer applied onto all connecting cables of ESD sensitive devices. Annis and Takami references likewise do not disclose the features of claim 1 with respect to a dissipative coating layer applied onto all connecting cables of ESD sensitive devices. This is evidenced by the fact that the Final Office Action does not in any way identify the foregoing features in either Annis or Takami. Instead, the Final Office Action merely asserts on page 4 that “Annis et al., in figure 1, discloses conductive wires (cables) connected to a circuit board” and “Takami et al., discloses cable 17 connecting processing board (13) to motherboard (14)”, without regard to a dissipative coating layer. Indeed, any review of Annis and Takami makes plain that these references simply do not cure the critical deficiencies of the Kawakami reference with respect to the features of claim 1. Therefore, for at least these reasons, claim 1 is allowable over the references as applied.

The Final Office Action also asserts that “[a] person of ordinary skill in the art would recognize the advantage of providing antistatic coating to cable connection to have protection against static electricity during the manufacturing process/assembly or during use

of the device” and “[t]herefore, it would have been obvious to a person of ordinary skill in the art at the time of applicant’s invention to provide connecting cables to the board of Kawakami et al., for input/output signal of various devices ... and to coat those cable connections with the dissipative coating”, but such assertions are clearly suggestions on the part of the Examiner alone with no supportive basis in the references cited. In this regard, the cases of In re Fine, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988), and In re Jones, 21 U.S.P.Q.2d 1941 (Fed. Cir. 1992), make plain that the Final Office Action’s generalized assertions that it would have been obvious to modify the references relied upon do not properly support a § 103 rejection. It is respectfully suggested that those cases make plain that the Final Office Action reflects a subjective “obvious to try” standard, and therefore does not reflect the proper evidence to support an obviousness rejection based on the references relied upon.

Moreover, the “problem confronted by the inventor must be considered in determining whether it would have been obvious to combine the references in order to solve the problem.” (See Diversitech Corp. v. Century Steps, Inc., 850 F.2d 675, 679 (Fed. Cir. 1998)). It is respectfully submitted that, as discussed above, the references relied on, whether taken alone or combined, do not suggest in any way modifying or combining the references so as to provide the presently claimed subject matter for addressing the problems and/or providing the benefits of the claimed subject matter, including, for example, a dissipative coating layer applied onto the top of the insulation layer and all connecting cables of ESD sensitive devices, as explained herein and in the specification.

More recently, the Federal Circuit in the case of In re Kotzab has made plain that even if a claim concerns a “technologically simple concept”, which is not even the case here, there still must be some finding as to the “specific understanding or principle within the knowledge of a skilled artisan” that would motivate a person having no knowledge of the claimed subject matter to “make the combination in the manner claimed”, stating that:

In this case, the Examiner and the Board fell into the hindsight trap. The idea of a single sensor controlling multiple valves, as opposed to multiple sensors controlling multiple valves, is a technologically simple concept. With this simple concept in mind, the Patent and Trademark Office found prior art statements that in the abstract appeared to suggest the claimed limitation. But, there was no finding as to the specific understanding or principle within the knowledge of a skilled artisan that would have motivated one with no knowledge of Kotzab’s invention to make the combination in the manner claimed. In light of our holding of the absence of a motivation to combine the teachings in Evans, we conclude that the Board did not make out a proper prima facie case of obviousness in

rejecting [the] claims . . . under 35 U.S.C. Section 103(a) over Evans.

(See In re Kotzab, 55 U.S.P.Q.2d 1313, 1318 (Federal Circuit 2000) (*italics added*)). Here again, it is believed that there have been no such findings to establish that the features discussed above of the rejected claims are met by the reference relied upon. As referred to above, any review of the reference relied upon makes plain that it simply does not describe the features discussed above of the claims as now presented.

Thus, the proper evidence of obviousness must show why there is a suggestion as to the reference so as to provide the subject matter of the claimed subject matter and its benefits.

In short, there is no evidence that the reference relied upon, whether taken alone or otherwise, would provide the features of the claims discussed above. It is therefore respectfully submitted that the claims are allowable for these reasons.

As further regards all of the obviousness rejections of the claims, it is respectfully submitted that not even a *prima facie* case has been made in the present case for obviousness, since the Office Actions to date never made any findings, such as, for example, regarding in any way whatsoever what a person having ordinary skill in the art would have been at the time the claimed subject matter of the present application was made. (See In re Rouffet, 47 U.S.P.Q.2d 1453, 1455 (Fed. Cir. 1998) (the “factual predicates underlying” a *prima facie* “obviousness determination include the scope and content of the prior art, the differences between the prior art and the claimed invention, and the level of ordinary skill in the art”)). It is respectfully submitted that the proper test for showing obviousness is what the “combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art”, and that the Patent Office must provide particular findings in this regard — the evidence for which does not include “broad conclusory statements standing alone”. (See In re Kotzab, 55 U.S.P.Q. 2d 1313, 1317 (Fed. Cir. 2000) (citing In re Dembiczak, 50 U.S.P.Q.2d 1614, 1618 (Fed. Cir. 1999) (obviousness rejections reversed where no findings were made “concerning the identification of the relevant art”, the “level of ordinary skill in the art” or “the nature of the problem to be solved”))). It is respectfully submitted that there has been no such showings by the Office Actions to date or by the Advisory Action.

In fact, the present lack of any of the required factual findings forces both Appellant and this Board to resort to unwarranted speculation to ascertain exactly what facts underly the present obviousness rejections. The law mandates that the allocation of the proof

burdens requires that the Patent Office provide the factual basis for rejecting a patent application under 35 U.S.C. § 103. (See *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984) (citing *In re Warner*, 379 F.2d 1011, 1016, 154 U.S.P.Q. 173, 177 (C.C.P.A. 1967))). In short, the Examiner bears the initial burden of presenting a proper *prima facie* unpatentability case — which has not been met in the present case. (See *In re Oetiker*, 977 F.2d 1443, 1445, 24, U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992)).

For at least the foregoing reasons, it is submitted that Kawakami in view of Annis and Takami does not render claim 1 obvious.

Claims 4 and 6 to 8 depend from claim 1, and are therefore the same arguments apply to these claims as well.

In view of the foregoing, reversal of the obviousness rejections of claims 1, 4 and 6 to 8 is respectfully requested.

B. Claims 2 and 3 are not obvious over Kawakami in view of Annis and Takami, and further in view of Remington.

Claims 2 and 3 stand rejected under 35 U.S.C. § 103 as being obvious over Kawakami in view of Annis and Takami, and further in view of U.S. Patent No. 5,350,228 (“Remington”). It is respectfully submitted that neither claim 2 nor claim 3 is obvious over Kawakami in view of Annis and Takami, and further in view of Remington, for at least the following reasons.

As an initial matter, claims 2 and 3 depend from claim 1. Accordingly, the arguments presented above in connection with claim 1 apply equally to claims 2 and 3 since Remington does not cure the deficiencies of Kawakami, Annis and Takami.

Moreover, the Office Action's assertion without further basis that “it would have been obvious to one of ordinary skill in the art at the time applicant's invention to provide the dissipative coating of Kawakami et al., with a surface resistivity ranges about 10^4 - 10^{11} Ω /(unit square) ... in order to have desired protection from static electricity” is mere hindsight reasoning and fails to demonstrate a requisite motivation to modify the Kawakami reference to provide the claimed features, which the Office Action admits is not disclosed by Kawakami.

In view of the foregoing, reversal of the obviousness rejections of claims 2 and 3 is respectfully requested.

C. Claims 9 to 14 are not obvious over Kawakami in view of Annis and Takami, and further in view of Dodsworth.

Claims 9 to 14 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Kawakami in view of Annis and Takami, and in further view of U.S. Patent No. 6,459,943 (“Dodsworth”). It is respectfully submitted that none of claims 9 to 14 is obvious over Kawakami in view of Annis and Takami, and further in view of Dodsworth, for at least the following reasons.

As an initial matter, claims 9 to 14 depend from claim 1. Accordingly, the arguments presented above in connection with claim 1 apply equally to claims 9 to 14 since Dodsworth does not cure the deficiencies of Kawakami, Annis and Takami.

Moreover, the Final Office Action's assertion without further basis that “it would have been obvious to one of ordinary skill in the art at the time of applicant’s invention to configure the modified structure of Kawakami et al, to reduce a static charge from 1000V to below 10 V” because “[a] person of ordinary skill in the art at the time of applicant’s invention would have configured the device to a desired safe voltage value”, or that “all the components as claimed are known in the art and it would have been obvious to a person of ordinary skill in the art at the time of applicant’s invention to provide ESD protection to those devices against electrostatic charge” is mere hindsight reasoning and fails to demonstrate a requisite motivation to modify the Kawakami reference to provide the claimed features, which the Office Action admits is not disclosed by Kawakami.


In view of the foregoing, reversal of the obviousness rejections of claims 9 to 14 is respectfully requested.

9. **CONCLUSION**

In view of the above, it is respectfully requested that the rejections of claims 1 to 4 and 6 to 14 be reversed, and that these claims be allowed as presented.

Respectfully submitted,

Dated: 3/7/06

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APPENDIX

1. An ESD electrostatic discharge device (ESD) safe wireless type of component comprising: a base, an electrically conductive copper trace provided on said base, and an insulating layer coated on said copper trace; wherein a dissipative coating layer is applied on the top of said insulation layer; wherein said dissipative coating layer is applied onto all connecting cables of ESD sensitive devices.
2. An ESD safe wireless type of component according to Claim 1, wherein the surface resistivity of said dissipative coating layer ranges about 10^4 - 10^{11} Ω /(unit square).
3. An ESD safe wireless type of component according to claim 1, wherein said dissipative coating layer ranges about 5 - 100 μm in thickness.
4. An ESD safe wireless type of component according to claim 1, wherein said wireless type of component has its bonding pad area exposed.
5. (Canceled).
6. An ESD safe wireless type of component according to claim 1, wherein the dissipative coating layer is applied via lamination.
7. An ESD safe wireless type of component according to claim 1, wherein the dissipative coating layer is applied via sputtering.
8. An ESD safe wireless type of component according to claim 1, wherein the dissipative coating layer includes a polymer.
9. An ESD safe wireless type of component according to claim 1, wherein said wireless type of component is configured to reduce a static charge from 1000 V to below 10 V.
10. An ESD safe wireless type of component according to claim 1, wherein the ESD sensitive devices include a component of a disk drive.
11. An ESD safe wireless type of component according to claim 1, wherein the ESD sensitive devices include magnetic data storage.

12. An ESD safe wireless type of component according to claim 1, wherein the ESD sensitive devices include a slider.

13. An ESD safe wireless type of component according to claim 1, wherein the ESD sensitive devices includes a pre-amp.

14. An ESD safe wireless type of component according to claim 1, wherein the ESD sensitive devices includes a micro-actuator.

EVIDENCE APPENDIX

No evidence has been submitted pursuant to 37 C.F.R. §§1.130, 1.131, or 1.132. No other evidence has been entered by the Examiner or relied upon by Appellant in the appeal.

RELATED PROCEEDINGS APPENDIX

As indicated above in Section 2 of this Appeal Brief, “[t]here are no other prior or pending appeals, interferences or judicial proceedings known by the undersigned, or believed by the undersigned to be known to Appellant or the assignee, SAE Magnetics (H.K.) Ltd., ‘which may be related to, directly affect or be directly affected by or have a bearing on the Board’s decision in the pending appeal.’ ” As such, there no “decisions rendered by a court or the Board in any proceeding identified pursuant to [37 C.F.R. § 41.37(c)(1)(ii)]” to be submitted.